

South Acton Commuter Rail Station

Community Transportation Technical Assistance Program



Prepared for:
Town of Acton

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Introduction

The South Acton commuter rail station (shown in Figure 1) is located on the Massachusetts Bay Transportation Authority (MBTA) Fitchburg commuter rail line, approximately 25 miles northwest of North Station in Boston. The South Acton commuter rail station provides service to the three largest employment areas for Acton residents (excluding Acton itself) – Boston, Concord, and Cambridge.

According to the most recent *MBTA System wide Passenger Survey*, 61 percent of South Acton commuter rail station users reside in Acton and 94 percent of trips are for work purposes. A detailed list of survey results is included in Appendix 1.

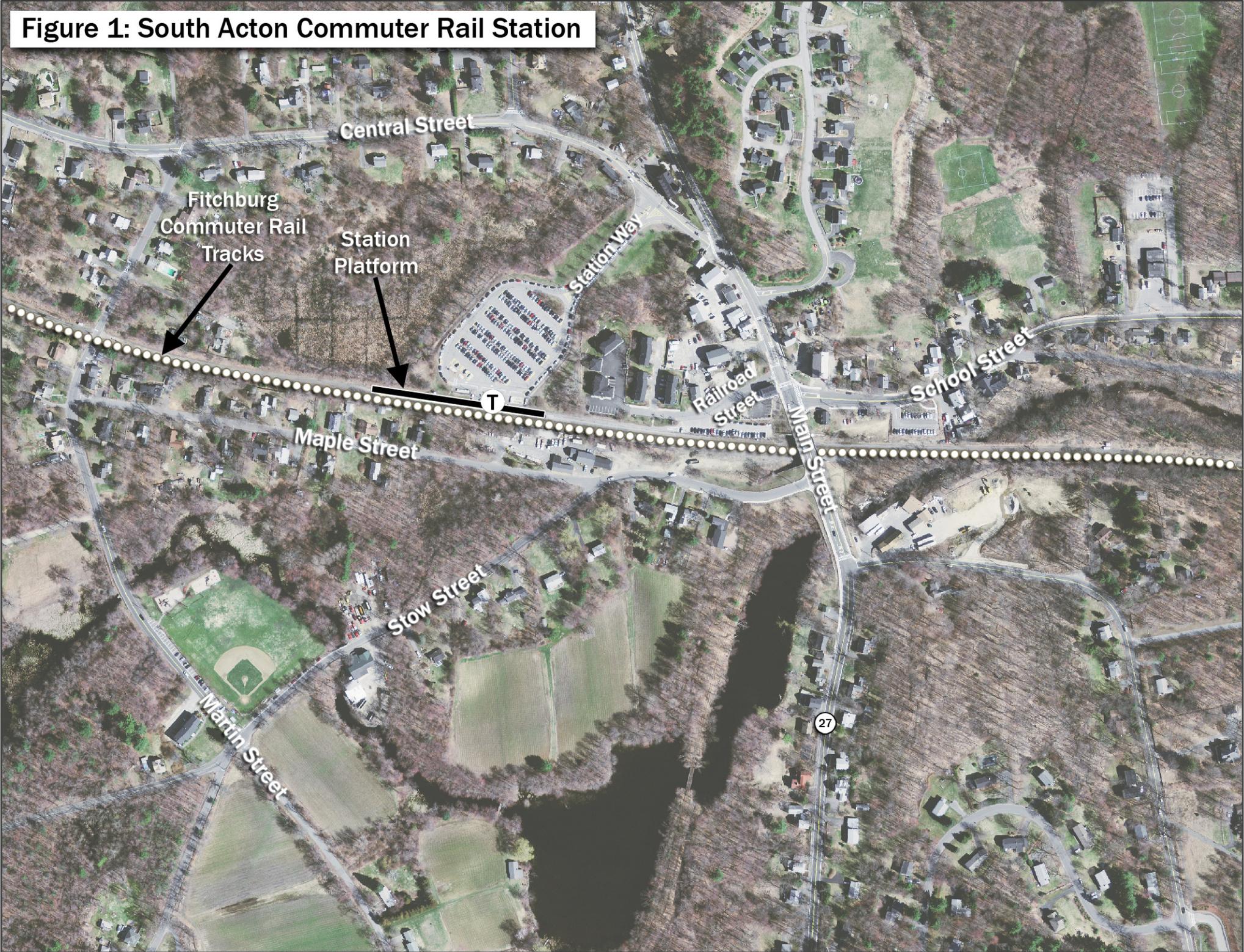
The South Acton station has the most weekday daily boardings of all stops on the Fitchburg Line with approximately 850 boardings on one shared inbound/outbound platform.¹ As part of an upgrade along the Fitchburg Line, the commuter rail will be upgraded to a double track from Boston to Ayer to increase train speeds and on-time performance. As part of this work, the South Acton commuter rail station will be expanded to a dual-platform.



Existing MBTA commuter rail platform
at South Acton station

¹ MBTA Ridership and Service Statistics, Thirteenth Edition, 2010. February 2009 counts- 856 daily boardings.

Figure 1: South Acton Commuter Rail Station



Fitchburg
Commuter Rail
Tracks

Station
Platform

Central Street

Station Way

Railroad
Street

School Street

Maple Street

Main Street

Stow Street

Martin Street

27

Currently, commuter rail travel time from South Acton to North Station is approximately 55 minutes during commuter peak hours. During the morning and evening peak periods, commuter rail service runs every 25-30 minutes.² Parking is provided for approximately 437 vehicles at or near the station: 268 spaces in a parking lot directly north of the station (resident permit and public meter spaces), and 169 spaces in satellite and shuttle lots.³ The South Acton station is in MBTA zone 6, which has a \$223/month fee for commuter rail service or \$6.75/ride.

The purpose of this study is to address the following concerns from the Town of Acton regarding the proposed station design and expansion to a double track system:

1. Potential for queues at the new pick up and drop off areas
2. Inadequate parking at the site
3. Potential increases in area traffic
4. Safety for pedestrians and bicyclists in the area
5. Pedestrian and bicycle connection with the nearby Assabet River Rail Trail

The Metropolitan Area Planning Council (MAPC) has observed existing conditions at the site and identifies the following potential improvements and suggestions.

Project Description

The proposed design involves the complete reconstruction of the station, including dual tracking, two new 800-foot ADA-accessible platforms, a new overhead walkway to provide access between the inbound and outbound platforms, and new access points. Access to the walkway will be provided by stairways and American Disabilities Act (ADA) compliant elevators. The platform to the north of the tracks will be utilized for outbound commuter trains (west towards Fitchburg), and the platform to the south of the tracks will be utilized for inbound commuter trains (east towards Boston).

The new station design will provide access from both sides of the station. Currently, the station has one platform on the north side of the tracks that provides access to the main commuter parking lot and pick up and drop off area. Currently, no proper pedestrian or bicycle access is provided from the south but pedestrians and bicyclists were observed crossing the tracks to access a worn path leading through a contractor's yard to Maple Street.

The proposed station will provide an additional access point from the south, with direct access from Maple Street to the new inbound platform. In order to accommodate access, Maple Street will be designed with a new one-lane, 65-foot one-way drop off area, as well as provide pedestrian and bicycle crossings that will enhance the connection between the station and the proposed Assabet River Rail Trail. The MBTA will install new bicycle racks and a landscaped pedestrian area on the south side of the station. The Town of Acton also plans to install bicycle lockers in this area.

In addition, the proposed project includes some minor changes to the existing layout of the station. As the station is expanding, the existing bicycle parking and pick up and drop off areas will need to be slightly relocated to create the space necessary for the new station headhouse. This will also

² Commuter rail schedule obtained from MBTA

³ Parking data provided by the Town of Acton

require the relocation of accessible parking spaces, the loss of a minor number of parking spaces, and a shortened pick up and drop off area. Currently, many commuters remain in personal vehicles in the drop-off area until the train arrives, forming a lengthy queue. Due to the new canopies provided in the station design, it is expected that a shortened drop-off area will be adequate, as shelter will be provided by the canopy rather than personal vehicles.



Bicyclists cross the tracks



Footpath between track and contractor's yard, providing access to Maple Street

Project Study Area

The project study area includes the commuter rail station and station surface parking lot, the surrounding off-site parking lots, proposed pick up and drop off areas, Main Street connections, and the connection to the Assabet River Rail Trail. The station is generally bounded by Central Street and the station surface parking lot to the north, Main Street to the east, Maple Street to the South, and Martin Street and a forested area to the west.

Existing Conditions

Current conditions at the site are documented below.

Roadway Network and Intersection Conditions

Figure 2 details the Massachusetts Department of Transportation (MassDOT) functional classifications of study area roadways. The study area includes the following roadways, categorized according to the MassDOT functional classifications:

Main Street (Route 27) is a rural minor arterial that runs north-south directly to the east of the South Acton commuter rail station. The intersection of Main Street and Central Street is approximately 200 feet south of the station parking lot driveway (Station Way). Within the study area, Main Street generally consists of one lane northbound and one lane southbound, with southbound turning lanes provided at School Street at High Street.

Central Street is a rural major collector that runs east-west to the north of the commuter rail line. Central Street provides access to the commuter rail station parking and pick up and drop off area. Within the study area, Central Street generally consists of one lane in each direction.

Stow Street is a rural minor collector that runs at an angle off of Maple Street and continues past Martin Street. Stow Street consists of one lane in each direction.

Maple Street is a local roadway that runs east-west between Main Street and Martin Street. Maple Street consists of one westbound lane between Main Street and Stow Street, and one lane in each direction between Stow Street and Martin Street.

Martin Street is a local roadway that runs north-south from Central Street to just south of Stow Street, where it ends. Martin Street consists of one lane in each direction.

Station Way is a local roadway that provides the only access and egress for the commuter rail parking lot. Station way intersects with Central Street and consists of one lane in each direction.

Railroad Street is a local roadway that provides the only vehicular access to the free off-site parking area located just off Main Street adjacent to the railroad tracks. Railroad Street intersects with Main Street and consists of one lane in each direction.

Vehicular Parking and Access

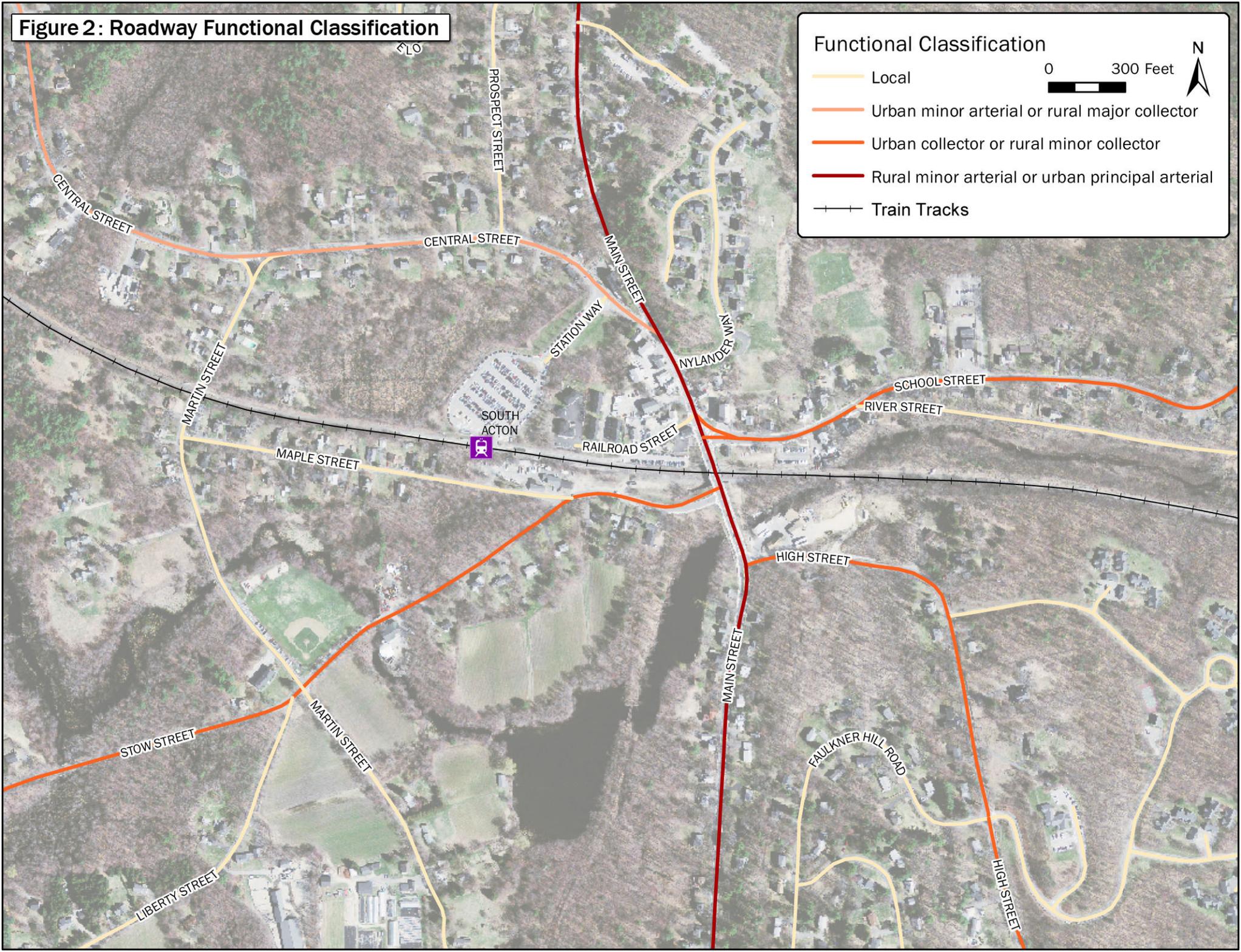
Parking is provided for approximately 400 vehicles near the South Acton commuter rail parking lot. The majority, 268 spaces, are located in a large parking lot directly north of the station.

Figure 2: Roadway Functional Classification

Functional Classification

- Local
- Urban minor arterial or rural major collector
- Urban collector or rural minor collector
- Rural minor arterial or urban principal arterial
- Train Tracks

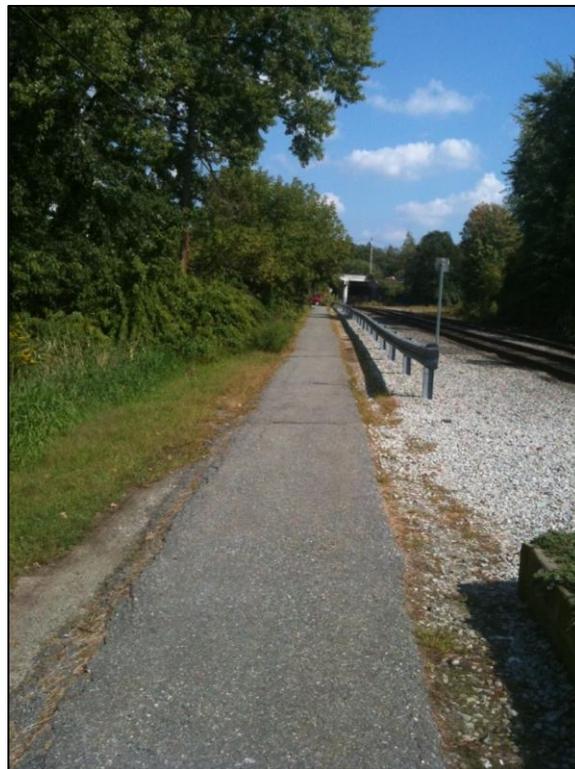
0 300 Feet





Station parking lot

An additional 129 spaces are provided in satellite lots. The closest satellite lot is located on Railroad Street (37 spaces) and is easily accessed by a three-minute walk from the station platform.



Path to Railroad Street off-site parking lot and Main Street

A detailed list of parking facilities near the commuter rail station are shown below in Table 1. Figure 3 details the locations of the on- and off-site parking facilities and the walking routes to the station. All on- and off-site parking is free with a residential permit, with the exception of the public metered parking spaces at the station parking lot that have a \$2.50 daily fee.

Table 1. South Acton Commuter Rail Parking Facilities

Location	No. of	Walking Distance to Station ²
Station Parking Lot	268	-
Railroad Street	37 ³	750' / 3 minute walk
School Street – Exchange Hall	25	1,400' / 5 minute walk
Martin Street – Jones Field	38	2,000' / 8 minute walk
School Street – South Acton Fire Station	29	2,400' / 9 minute walk
Total	397	

¹ Provided by Town of Acton

² Distances and walk times estimated by MAPC (1 mile = 20 minutes). These travel times do not include wait time at signals. The Jones Field parking area walking time assumes the pedestrian utilizes the cut-thru route across the tracks.

³ 37 spaces available in non-Winter months. In Winter months, 31 spaces are available.

Central Street is the only access/egress point for the station parking lot. The intersection of Main Street and Central Street is located approximately 200' south of the parking lot driveway. The parking lot driveway is also referred to as "Station Way".

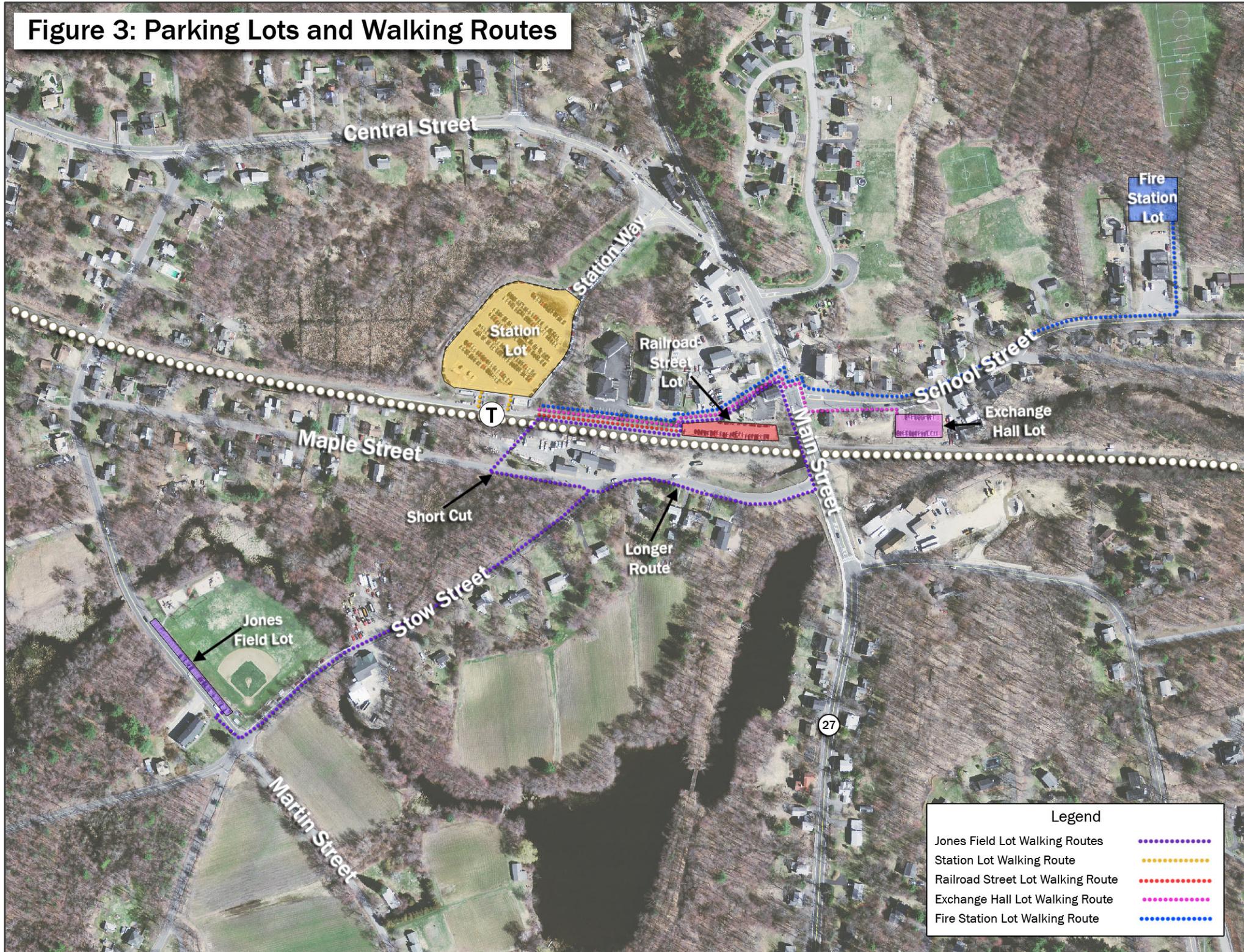
The Railroad Street off-site parking area is accessed from Railroad Street directly to the west of Main Street. The Jones Field parking area is accessed off of Martin Street near the intersection of Martin Street and Stow Street. School Street, to the east of Main Street, provides two off-site parking areas: the Exchange Hall and the South Acton Fire Station.

Pedestrian Access

According to *Acton 2020*, Acton has approximately 119 miles of roads, with approximately 48 miles of sidewalks (40 percent coverage). The *2010 Boston Region's Pedestrian Transportation Plan* sites Acton as having 13 percent sidewalk cover on main roads (defined as carrying through traffic and having limited access points), and 33 percent sidewalk cover on local roads (defined as serving adjacent businesses and residential areas and having more access points). Sidewalk cover is defined as having a sidewalk on one or more sides. Of the 101 cities and towns in the regional plan, Acton ranks 88th in terms of main road sidewalk availability and 66th in terms of local road sidewalk availability.

Acton's sidewalks are often available on only one side of the street. Pedestrians regularly have to shift from one side to another to remain on a street's sidewalk. Newly constructed sidewalks measure 5 feet or more in width but many older sidewalks are narrow, measuring between 3-5 feet.

Figure 3: Parking Lots and Walking Routes



Legend	
Jones Field Lot Walking Routes	
Station Lot Walking Route	
Railroad Street Lot Walking Route	
Exchange Hall Lot Walking Route	
Fire Station Lot Walking Route	

In the immediate vicinity of the station, sidewalks are provided along Main Street, School Street, Central Street, Martin Street (between the railroad tracks and Jones field), Railroad Street and Station Way. New sidewalks are proposed on Martin Street from Central Street to the railroad tracks.

Pedestrian access is provided to the station from the north (Central Street/Station Way), and from the east (Main Street/School Street/Railroad Street). A crosswalk is provided across Central Street at the intersection of Main Street, located approximately 200 feet southeast of Station Way. Some pedestrians choose to access the station from the south via a cut-through from Maple Street on a privately owned contractor yard. The signage on Maple Street directing pedestrians “Walking Route to Train – Use Main Street Bridge to Cross Rail Road Tracks” is largely ignored as there are minimal sidewalks on Stow Street or Maple Street to provide that connection.



Worn path from Maple Street/contractor's yard to station



Sign on Maple Street directs pedestrians to commuter rail:
“Walking Route to Train: Use Main Street Bridge to cross Railroad Tracks”
(sign is generally disregarded and pedestrians walk through contractor’s yard)

Bicycle Parking and Access

Many commuter rail users opt to ride bicycles to the station. The station has multiple areas to secure bicycles – including rentable lockers and standard bicycle racks. The Bike & Ride locker program is run by the Town of Acton Planning Department and lockers can be rented at a cost of \$75 per year or \$10 per month.

The station has numerous bicycle storage facilities – nearly all of which were observed to be at or near capacity. 20 large, highly-durable bicycle lockers are provided at each end of the station platform. Bicycle racks are also provided at each end of the station. 22 bicycles were observed parked in racks at the station during observations, and all but three of the forty bicycle lockers are currently rented so it is assumed that a significant amount of bicycles were also out of view within the lockers. No bicycles were observed parking on any trees, posts, or fences.

Bicycle access to the station is generally via the same routes as pedestrians. Currently, Acton does not have any marked bicycle lanes and intermediate-level on-road experience is generally necessary for cyclists. Cycling during vehicular peak traffic periods is considered “less than optimal” according to *Acton 2020*.

According to MAPC’s *Greater Boston Cycling and Walking Map*, there are no existing bicycle paths in the area surrounding the South Acton commuter rail station. However, Acton is currently involved in the planning stages for two major rail trail projects: the Assabet River Rail Trail and the Bruce Freeman Rail Trail. The Assabet River Rail Trail will reach from Marlborough to the South Acton

commuter rail station. Trail parking will be provided for approximately 8 vehicles at the end of the trail near the South Acton commuter rail station. Portions of the trail are already completed, but the section in Acton is currently in the design phase. The trail will create important connections to several local destinations, including Clock Tower Place office park in Maynard. Construction of the trail is expected to begin before 2020. In addition, the Bruce Freeman Rail Trail, which will connect directly to the West Concord station, will stretch approximately 25 miles from Framingham in the south to the Chelmsford/Lowell line in the north. The Bruce Freeman Rail Trail is completed in Chelmsford and Westford, in the final design phase for Acton and Concord, and in preliminary design for the remaining sections. These two off-street trails will be constructed for local residents and commuters as transportation and recreational space.



Bike & Ride Program at the commuter rail station – large lockers for all-day bike storage



Bike storage area (grey Bike & Ride lockers shown at left of photo)

Additional Public Transportation/Shuttles

No fixed route bus service is provided in Acton. In order to provide an alternative to personal vehicle use, the Town has a MinuteVan service that citizens can utilize. The MinuteVan operates between 6:45 - 9:25 a.m. for inbound commuters and 5:10 -7:30 p.m. for outbound commuters. Annual park and ride memberships are available for \$250. The shuttle runs between the South Acton commuter rail lot and two off-site parking lots: the West Acton Fire Station, and the Mt. Calvary Church. The shuttle ride from the West Acton Fire Station is approximately 15 minutes, and the ride from Mt. Calvary Church lasts approximately 5 minutes. Annual passes for the shuttle service alone (i.e., without parking) are available for \$200, and anyone may pay \$10 for a book of ten ride tickets. The MinuteVan was observed dropping off commuters in the morning and picking up commuters in the evening (generally one van passenger per train).



Minute Van picking up a passenger at station

In addition to the MinuteVan, the Clock Tower Place office park in Maynard provides shuttle service for employees to and from the South Acton commuter rail station. As there are limited trains running outbound from Boston in the morning and inbound in the afternoon, there are limited opportunities for Clock Tower Place employees to take the commuter rail. Approximately 7 employees were observed utilizing the shuttle service to the station in the evening.

Yankee Line, Inc. provides weekday inbound bus service in the morning commuter period and outbound bus service in the evening between East Acton and Copley Square in Downtown Boston. This service provides local residents with an alternative to the commuter rail, with an average travel time of 50 minutes each way. The cost for the Yankee Line, however, is higher than the commuter rail, with tickets costing \$8 one-way, or \$65 for a pack of 10 tickets.

Mode Share Data

Table 2 details 2000 Census data sites the following mode shares for Acton residents:

Table 2. Acton Resident Commuter Mode Shares¹

Mode Share	Percent
Drive Alone	80.8
Carpool/Vanpool	7.4
Public Transit	4.5
Walk	1.2
Work at Home	5.6
Other	0.4

¹ Provided by Acton 2020 document

This mode share data is fairly consistent with the communities that share a border with Acton. Compared to its surrounding communities, Acton has a lower number of residents that drive alone to work, and a higher percentage of carpool users and transit users. Among the communities that surround Acton, the percentage of residents that drive alone ranges from 76.8 percent (Concord) to 88.0 percent (Westford). The percentage of residents that carpool ranges from 3.4 percent (West Concord) to 8.6 percent (Maynard) and the percentage of residents that utilize public transit ranges from 1.2 percent (Westford) to 5.7 (West Concord).

Site Visit

A site visit was conducted at the South Acton commuter rail station on September 13, 2011. Data was collected during the weekday morning (6:16 to 8:45 a.m.) and evening (4:15 to 6:45 p.m.) peak periods. Based on these data, the weekday morning and evening peak periods at the station were identified as the periods surrounding the 6:38 and 7:08 a.m. inbound (departure) trains, and the 5:22 and 6:12 p.m. outbound (arrival) trains. The station parking lot was at capacity by 7:08 a.m.

The MBTA Fitchburg Line runs one express train per peak period. The 7:08 a.m. departure train towards Boston and the 5:22 p.m. arrival train from Boston both run express between the South Acton station and Porter Square (MBTA Red Line station) in Cambridge, decreasing travel time by approximately 15 minutes. The occupancy of both the inbound and outbound express trains was observed to be higher than all non-express trains.

Automated traffic recorder (ATR) counts collected in October 2007, obtained from the Town of Acton, identify the weekday morning and evening peak hours for Main Street and Central Street as 8:00-9:00 a.m. and 5:00-6:00 p.m. According to this data, Central Street (west of station) carries approximately 7,000 vehicles daily, Main Street (north of station) carries approximately 17,000 vehicles daily, and Main Street (south of station) carries approximately 13,000 vehicles daily.

It is interesting to note that the early morning Main Street traffic peak and commuter rail express train times do not overlap, yet the evening Main Street traffic peak and commuter rail express time does overlap. Commuter arrivals in the morning are spread out, as people arrive at various times in anticipation of the train (some arrive two minutes before the train departs, some arrive 20 minutes

before the train departs), resulting in minimal vehicular delays at the station in the morning peak hours. However, in the evening, all commuters depart the train at the same time, resulting in a noticeable peak of activity and vehicular delays. In the evening peak hour, vehicular delays were noticeable, with exit queues backing up throughout the parking lot and the length of Station Way, and lasting for eight minutes after the arrival of the train. The majority of the delay was due to left-turning vehicles out of Station Way on to Central Street and the minimal gaps available in Central Street traffic to make those left turns. In order to exit prior to the formation of a vehicle queue in the parking lot, multiple commuters were observed running to their vehicles after departing the train.

As the evening peak hours for the station and surrounding areas seem to be the worst case (as there is a critical vehicle and pedestrian flow immediately after the evening commuter rail arrives), observations in Table 3 detail evening mode share observations at the station.

Table 3. South Acton Commuter Rail Station Passenger Evening Observations¹

Mode Share	Percent
Parked at Station	45%
Walked to/Parked at Points East (Railroad Street and beyond)	26%
Picked up at Station	15%
Crossed Tracks to Maple Street	9%
Bicycle	4%
Shuttle	1%

¹ Observed by MAPC on Tuesday, September 13, 2011 (approximate)

During the site visit at the South Acton commuter rail station, it was observed that the majority of commuters park at the station. As parking spaces at the station are limited and fully occupied by 7:10 a.m., many commuters are forced to consider other modes of transportation, including driving to Alewife Station or directly into Downtown Boston or Cambridge. A large group of commuters were observed traveling towards Railroad Street, to off-site parking areas and local residences. Approximately 15 percent of commuters were observed being picked up at the station. A smaller number of people were observed crossing the tracks to Maple Street, bicycling, and utilizing local shuttles.

It is expected that if more parking spaces were to be made available at the station, current off-site parking users, commuters that are currently picked up at the station, commuters that cross the tracks to Maple Street, commuters currently driving into Boston and Cambridge, and shuttle riders could all be potential users of an expanded parking lot .

Future Conditions

Local Public Transportation Improvements

In June, 2011, the MBTA received a \$2 million grant to construct a new parking lot at the Littleton/495 commuter rail station. The Littleton/495 commuter rail station is located approximately 6 miles northwest from the South Acton station, and is the next outbound station. Under this grant, the privately-owned and operated parking lots immediately adjacent to the station were acquired for public use. Additional upgrades include the MBTA's convenient parking payment system and an off-street pick up and drop off area to accommodate shuttles and private vehicles. The new lots will increase the parking capacity by 45 spaces, for a total of 195 spaces. As the total number of parking spaces will remain lower than the South Acton station, the increase in parking at Littleton/495 station is not expected to make a major shift in commuter travel patterns.

Currently, the express train stops both at the Littleton/495 Station and the South Acton Station. Due to the Littleton/495 station improvements, express service in the future may be limited only to the Littleton/495 station. If the express train is no longer available in South Acton, it is anticipated that this move will significantly increase use of the Littleton/495 station and relieve some parking congestion at the South Acton station. The Littleton/495 station charges a higher monthly fee (\$235/month) than South Acton (\$223/month) – which may result in some users continuing to utilize the South Acton station rather than paying a higher monthly transit pass at Littleton/495.

Recommendations and Additional Opportunities

1. Potential for queues at the new pick up and drop off areas

The new pick up and drop off area to the south of the station is expected to increase vehicle traffic on the local roadways of Maple and Stow Streets. It is expected that some vehicles currently using the pick up and drop off area to the north of the station will switch to the new proposed location to avoid the traffic delay that results in the commuter lot in the evening peak period. However, the one-way configuration of Maple Street results in a pick up and drop off location not as attractive as the existing location at the north side of the station that provides access to Main Street northbound and southbound.

Although it is difficult to predict, due to the fact that inbound trains will be located at the south side of the station, it is likely that the majority of use on the south side will be in the morning for inbound drop-offs, and that the majority of evening pick-up activity will remain to the north where the outbound trains will drop-off passengers. Morning drop off activity results in short queues, as commuters generally exit the vehicle upon arrival and the driver immediately leaves the area. Evening pick-up activity creates a longer queue, as drivers must wait for the arrival of the train before picking up commuters.

As Maple Street is one-way between Main Street and Stow Street, it is expected that even if pick up in the evening peak hours extends beyond the designated pick up and drop off area, that roadway congestion will be minimal as u-turns and three point turns will be illegal. During field observations, it was noted that approximately 15% of commuters are picked up in the evening peak period. The maximum observed queue in the evening peak was approximately 20 vehicles waiting for the 5:22 express train. Assuming half of the vehicles will utilize the proposed pick up

area (a conservative estimate), the queue in the evening peak hour is not expected to exceed 10 vehicles. Enforcement of the pick up area on Maple Street is recommended to prevent long-term idling.

2. Inadequate parking for the site

As it was previously reported, the parking lot at the commuter rail station is at capacity very early in the morning, generally by 7:10 am. Creating additional parking spaces in the immediate vicinity of the site appears unlikely, as all available surface lots in the area of the station are already used for commuter parking. Fortunately, services like the MinuteVan provide access from off-site parking areas to the station. MAPC recommends encouraging shuttle ridership for commuters parking in off-site lots and also encouraging local residents to walk or ride their bicycle to the station.

Increasing parking fees at the station is another option to decrease parking demand. As shown in Appendix 2, the daily parking rates at the two closest commuter rail stations are nearly double the rate charged at the South Acton station, likely resulting in increased parking demand at the South Acton station. West Concord and Littleton/495 offer daily parking rates of \$4.00, compared to \$2.50 charged at the South Acton station.

3. Potential increases in area traffic

The new pick up and drop off area and the new access point for the Assabet River Rail Trail located to the south of the station will increase vehicle, bicycle, and pedestrian traffic on Maple Street and Stow Street. As Maple Street is one-way between Main Street and Stow Street, it is not expected that a significant number of vehicles will utilize the proposed pick up and drop off area due to the circuitous route required by the one-way. However, shuttle activity will be re-routed to the south side of the station, which will create some additional vehicle activity. If vehicular activity significantly increases within this area, enforcement may be necessary to limit vehicular activity on local roads.

4. Safety for pedestrians and bicyclists in the area

Due to the parking limitations at the station, walking and bicycling to the station should be strongly encouraged. However, pedestrians and bicyclists need to be provided with well-lit and wide sidewalks, bicycle lanes or sharrows⁴, and signage to remind drivers and bicyclists to “Share the Road”.

With the addition of the new access point and bicycle parking on the south side of the station and the proposed construction of the Assabet River Rail Trail, sidewalks, lighting, and bicycle accommodations should be prioritized along Maple and Stow Streets. Vehicle speeds should be minimized in the area of the new access point, so that pedestrians and bicyclists can safely cross the road. A raised crosswalk may be considered across Maple Street to connect the Assabet

⁴ Sharrows are pavement markings to show the lane should be shared by both cars and bicycles. The word is a combination of both “share” and “arrow”.

River Rail Trail to the station, increase visibility of pedestrians and bicyclists, and to slow vehicle traffic.

5. Pedestrian and bicycle connection with the nearby Assabet River Rail Trail

As mentioned above, a safe connection between the South Acton commuter rail station and the proposed Assabet River Rail Trail is essential in order to encourage pedestrian and bicycle activity in the area. Reducing vehicle speeds and increasing pedestrian and bicycle visibility through the techniques mentioned above is recommended.

Additional Opportunities

1. Provide electric vehicle charging stations for hybrid electric and full electric vehicles at the station.
2. Provide additional motorcycle and scooter parking at the station. Motorcycles and motor scooters are lower-emissions means of commuting. Providing safe and convenient motorcycle and scooter parking can help encourage users to utilize low-emission vehicles and will lessen the need for personal vehicle parking spaces.

APPENDIX 1

MBTA Systemwide Passenger Survey (2008-2009)

MBTA survey data provides the following details about the South Acton commuter rail station:

- Trip Purpose:
 - 94% of trips are for work purposes
 - 2% of trips are for school
 - 2% of trips are for social activities
 - 2% of trips are for personal business
- Reasoning:
 - 87% of commuters utilize the commuter rail so that they can avoid traffic and driving
 - 65% of commuters utilize the commuter rail so that they can read/do other work
 - 59% of commuters utilize the commuter rail because it is environmentally responsible
- Origin Locations:
 - 61% of South Acton commuter rail station users reside in Acton
 - 13% of South Acton commuter rail station users reside in Stow
 - 7% of South Acton commuter rail station users reside in Boxborough
- Access Mode Share:
 - 64% of station users drive and park at the station
 - 21% of station users are dropped off at the station
 - 13% of station users walk to the station
 - 2% of station users ride their bicycle to the station
- Top Commuter Rail Destinations:
 - 23% - Cambridge: Kendall/MIT
 - 15% - Boston: Financial/Retail District
 - 10% - Cambridge: Harvard Square
 - 8% - Boston: Government Center
 - 7% - Boston: North End
- Age of Riders:
 - 58% of riders are between the ages of 45-64
 - 27% of riders are between the ages of 35-44
 - 9% of riders are between the ages of 25-34
- Annual Household Income:
 - 75% of riders have an annual household income of >\$100,000
 - 13% of riders have an annual household income of \$75,000-\$99,999
 - 12% of riders have an annual household income of <\$75,000
- Race:
 - 83% of riders identify themselves as White
 - 14% of riders identify themselves as Asian

- Number of Days per Week of Ridership:
 - 73% of riders use the commuter rail 5 days a week
 - 14% of riders use the commuter rail 4 days a week
 - 11% of riders use the commuter rail less than 4 days a week
- Vehicle Availability:
 - 97% of riders have a license
 - 99% of riders have at least 1 vehicle in their household
 - 83% of riders have at least 2 vehicles in their household
 - 84% of riders have a vehicle available to them

APPENDIX 2

Fitchburg Line Parking Availability and Rates (January, 2012)

Fitchburg Line Parking Availability and Rates			
Station	Spaces	Daily Rate	Managed By
North Station	1,275	Varies	Central Parking
Porter Square	N/A	No MBTA Parking	N/A
Belmont Center	N/A	No MBTA Parking	N/A
Waverley	N/A	No MBTA Parking	N/A
Waltham	50	\$2.00	City of Waltham
Brandeis/Roberts	70	\$4.00	Central Parking
Kendal Green	57	Free	Town of Weston
Hastings	6	Free	Town of Weston
Silver Hill	N/A	No MBTA Parking	N/A
Lincoln	161	\$3.00	Town of Lincoln
Concord	86	Free	Town of Concord
West Concord	146	\$4.00	Town of Concord
South Acton	287	\$2.50	Town of Acton
Littleton/495	200	\$4.00	Central Parking
Ayer	30	Free	Town of Ayer
Shirley	25	Free	Town of Shirley
North Leominster	140	\$3.00	Montachusett RTA
Fitchburg	400	\$3.00	Montachusett RTA

Data obtained from mbta.com